

Remarks

The Official Action dated December 13, 2005 has been carefully considered. Consideration of the changes and remarks presented herein and reconsideration of the rejections are respectfully requested.

Claims 15-19 remain in the present application, and claims 1-14 and 20-30 have been withdrawn by the examiner due to the restriction requirement. Claims 15-19 have been amended for clarification and without affecting claim scope. Support for the amendments can be found in the specification, claims and drawings as originally filed. In particular, support for the amendments can be found in the specification at, for example, page 5, line 15 to page 8, line 16; and at page 17, line 19 to page 19, line 25. Accordingly, it is believed that these changes do not involve any introduction of new matter, and entry is believed to be in order and is respectfully requested.

In the Office Action, it was indicated that certain items in the Information Disclosure Statements were not considered. Applicants submit a Supplemental Information Disclosure Statement herewith, which includes the article "Thermal Wave Imaging of Aircraft Structures" and the cited pages of "Theory and Practice of Infrared Technology for Nondestructive Testing." It is believed that these pages are legible and correctly cited, but if any pages are not legible or included, Applicants respectfully request that the other pages still be considered and that the IDS be modified by the examiner to indicate the pages that are considered. As for the patents not in the English language, the Supplemental IDS submitted herewith includes English abstracts for those previously submitted that were not in the English language. It is submitted that English abstracts are sufficient for the required concise explanation, per MPEP 609.04 (a).

Claims 15-19 were rejected under the argument that they are unpatentable under 35 USC § 103(a) over the Murphy reference (US 2002/0018510) in view of the Kenway reference (US 6,346,704). Applicants traverse the rejections as the references do not teach or suggest all of the elements of these claims. A §103 rejection based upon a reference is not proper unless there is some suggestion or motivation to combine the references, and the combination must teach or suggest all the claim elements. MPEP § 2143. The teaching or suggestion to make the modification must be found in the prior art, not in applicants' disclosure. MPEP § 2143.

In this case, the references do not teach or suggest all of the claim elements even if the references are considered in the argued combination. For example, claim 15 recites assigning a thermal effusivity value to each of a plurality of paint process coatings, configuring an expected change of temperature for the paint process coatings based on the effusivity values for each of the coatings, and comparing a measured change of temperature in the surface and coatings to the expected change of temperature so as to detect a defect in the application of the paint process coatings based on the effusivity values. The Kenway reference does not mention effusivity at all. Moreover, the reference relates to comparing multiple infrared scans (see e.g., Abstract) and does not appear to disclose comparing a measured change of temperature of a surface and paint process coatings to an expected change of temperature that is based on effusivity values of the paint process coatings. As for the Murphy reference, it mentions effusivity one time, but it does not teach or suggest use of effusivity in the manner claimed. Rather, in the Murphy reference, a thermodynamic model uses effusivity to extract certain material properties such as β , the microwave absorption coefficient, relating to information about the subsurface heating. (paragraphs 15-23). Accordingly, these references do not teach or suggest assigning a thermal effusivity value to each of a plurality of paint process coatings, configuring an expected change

of temperature of the coatings based on the effusivity values for the coatings, manipulating the temperature of the surface and the coatings, measuring the change of temperature in the manipulated surface and coatings, and comparing the measured change of temperature in the surface and coatings to the expected change of temperature so as to detect a defect in the paint process coatings based on the effusivity values.

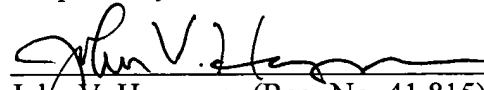
Moreover, neither reference appears to suggest applying paint process coatings to a surface and detecting defects in the paint process coatings which have been applied. Rather, the Murphy and Kenway references appear to relate to evaluation of specific articles and materials, and provide no teaching or suggesting of various operations of claim 15, such as for example those relating to assigning effusivity values to paint process coatings, configuring expected change of temperature for the coatings, and measuring the change of temperature in the surface and coatings.

Furthermore, even if prior art could be combined to result in a claimed invention, the combination would not render a claim obvious unless the prior art suggests the desirability of the combination. In re Mills, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). Although prior art may be capable of being combined or modified to operate as in the claimed invention, there must be some suggestion or motivation in the references to do so. MPEP § 2143.01. In other words, there still must be evidence that "a skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references *for combination in the manner claimed*." In re Rouffet, 47 U.S.P.Q.2D 1453, 1456 (Fed. Cir. 1998) (emphasis added); see also In re Werner Kotzab, 55 U.S.P.Q.2D 1313, 1317 (Fed. Cir. 2000) ("[A] rejection cannot be predicated on the mere identification . . . of individual components of claimed limitations. Rather, particular findings must be made as to the

reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed."). Applicants found no teaching or suggestion provided in the cited references, or in the Office Action, to combine the teachings of the references to arrive at the invention as defined by the respective claims.

For at least the above reasons, it is respectfully requested that the rejections be reconsidered and withdrawn. It is believed that the above represents a complete response to the rejections and that the present application is in condition for allowance. Reconsideration and an early allowance are requested.

Respectfully submitted,



John V. Harmeyer (Reg. No. 41,815)

DINSMORE & SHOHL LLP

1900 Chemed Center

255 East Fifth Street

Cincinnati, Ohio 45202

(513) 977-8649

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